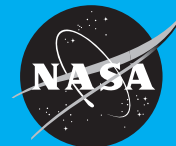




National Aeronautics and
Space Administration



Office of Small Business Programs (OSBP) NEWSLETTER

SMALL BUSINESS SUCCESS STORY Johnson Space Center Light Manufacturing Event

Robert E. Watts, Small Business Specialist

Johnson Space Center

Small businesses have been increasingly more successful and innovative in helping to meet the technical challenges we have at NASA's Johnson Space Center (JSC). Our NASA engineers and large prime contractors are constantly being challenged to come up with solutions at a time when budgets and schedules are tighter and the technology required is more challenging. The JSC Industry Assistance Office is responsible for meeting with vendors and helping them understand how they can acquire business at JSC. This results in more qualified vendors competing for Center work and aligns directly with JSC 2018 mission objectives.

In support of Objective 1 of NASA's Fiscal Years 2016 and 2017 Small Business Improvement Plan, three small business initiatives developed by representatives across NASA implemented Agency-wide, the

Industry Assistance Office (IAO) began discussions with JSC's Engineering Directorate to understand how small businesses could help them with their technical challenges.



Small business representatives discuss opportunities with JSC personnel at the JSC Light Manufacturing Event.

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SPRING 2018 EDITION

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🚩 **Top image:** After successfully landing on an Edwards Air Force Base runway on Nov. 11, 2017, Sierra Nevada Corporation's Dream Chaser was prepared for its tow back to NASA Armstrong Flight Research Center in California.

where small business makes a **big** difference

AA's Corner



Glenn A. Delgado

Associate Administrator
NASA Office of Small Business
Programs

Iwant to start this corner by thanking everyone involved in the acquisition process. NASA has proved again that “small business makes a big difference” here. It appears that NASA exceeded our fiscal year 2017 (FY17) Small Business Administration (SBA)–assigned Small Business goal of 16.00 percent with an actual achievement of 16.50 percent. This equates to approximately \$2.7 billion awarded directly to small businesses. In addition to exceeding our small business goal, NASA showed marked increases in dollars awarded to Women-Owned

Small Businesses (WOSB) and Disabled-Veteran–Owned Small Businesses (SDVOSB). This proves everyone in the acquisition process looks at small business as the first solution to make NASA’s missions a success. This is also true of our large business partners. In FY17, our large business partners subcontracted approximately another \$2.8 billion to the small businesses that support them in completing NASA’s missions. I am very proud to say that combined, small businesses received over \$5.5 billion from NASA and our large prime partners. This is an increase of over \$277 million from FY16.

OSBP also received more good news on February 20, 2018, when we received a letter from the SBA approving NASA’s Mentor-Protégé Program for a period of 5 years. This validates the value of NASA’s Mentor-Protégé Program to the Agency as well as both the mentors and protégés. At this time, of the 11 agencies/departments that currently have mentor-protégé programs, only 4 were approved to continue their programs. Currently, NASA has 30 approved mentors and 7 active agreements with 10 more new agreements in the approval process from 6 different NASA Centers. I am very proud of how the program has flourished over the previous 4 years under the leadership of Tabisa Taliwaku Kalisa and the Center Small Business Specialists, as well as the benefits that both the mentors and protégés have received.

During FY18, OSBP has begun a series of Webinars and podcasts to provide training to industry and acquisition personnel. Some of the Webinar and podcast topics include the following:

- Demystifying Joint Ventures
- Relevance of Subcontracting
- Category Management

- Overview of the Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Program
- What Small Businesses Need To Know (When Responding to Solicitations)
- Strategic Marketing to Large Prime Contractors
- How To Utilize a Small Business Advocate Within a Large Business

As you can see, there are some very important topics being addressed, and participating in these discussions can be very beneficial and worthwhile. More information can be found at <https://osbp.nasa.gov/knowledge-portal.html>.

As cited above, one of the subjects to be discussed during the Webinars is Category Management. This is a very important issue that small businesses should pay very close attention to. It’s a Government-wide initiative to reduce duplication of contracts across the Government, which encourages agencies to use “best in class” contracts. There are 10 categories being reviewed at this point in time. These categories include the following:

- | | |
|-------------------------------|------------------------------------|
| • Human Capital | • Transportation and Logistics |
| • Facilities and Construction | • Medical |
| • Information Technology | • Industrial Products and Services |
| • Professional Services | • Travel |
| • Office Management | • Security and Protection |

Policies and execution of this initiative are still being developed, so it is very important for all small businesses to stay abreast of this subject. All Federal small business offices are working with the SBA and Office of Management and Budget (OMB) to ensure that small business interests are incorporated in the final policies.

In closing, I would like to thank and recognize the FY17 Small Business Advocates Award and Small Business Industry Award winners.



SMALL BUSINESS ADVOCATE AWARD WINNERS

- **Small Business Specialist of the Year:**
Joyce McDowell, Kennedy Space Center (KSC)
- **Small Business Technical Advisor/Coordinator of the Year:**
Kimberly Cannon, Langley Research Center (LaRC)
- **Procurement Team of the Year:**
Environmental Support Services Procurement Team, LaRC
- **Technical Person of the Year:**
Alicia Carroll, Marshall Space Flight Center (MSFC)
- **Program/Science/Research and Development Team of the Year:**
The Advanced Composites Project (ACP) Team, LaRC

SMALL BUSINESS INDUSTRY AWARD WINNERS

- **Small Business Prime Contractor of the Year:**
Omitron, Inc., Goddard Space Flight Center (GSFC)
- **Small Business Subcontractor of the Year:**
Metis Technology Solutions, Inc., LaRC
- **Large Prime Contractor of the Year:**
Science Applications International Corporation, LaRC
- **Mentor-Protégé Agreement of the Year:**
URS Federal Services, Inc. (Mentor), and Seabrook Solutions, LLC (Protégé), MSFC ➤

Networking for Small Businesses

Christine L. Munroe, Small Business Specialist

Ames Research Center

During the last few months, I've met a lot of small business, prime contractors, and consultants who are interested in doing business with the Government, and they don't know exactly where to start.

Here are a few networking tips.

1. Be Educated

- Understand your strategic advantages and your "disadvantaged advantages," such as utilizing your 8(a) or Historically Underutilized Business Zones (HUBZone) status or being owned by veterans or women.
- Sign up for training at the Procurement Technical Assistance Centers (PTAC), SBA, or Service Corps for Retired Executives (SCORE) Office.
- If you are a small business, sign up with the PTAC or local Small Business Development Centers (SBDC) to assist you with reviewing your proposal before you submit it. Effective as of October 1, 2017: The North American Industry Classification System (NAICS) codes SBA Web site has a new SBA tool to assist applicants: <https://www.sba.gov/tools/size-standards-tool>.

2. Leverage Partners and Competitors

- Small businesses as well as large businesses can easily benefit from partnering with other same-size or different-size businesses.
- There are mentor-protégé programs and other programs through Small Business Advocate offices that can help small businesses.
- Understand your advantages and what partners may make the best sense. Be smart about ➤ [Continued on page 16](#)

OSBP's Mission and Vision

MISSION STATEMENT

Our mission in the Office of Small Business Programs is to:

- ensure that the Agency is compliant with all Federal laws, regulations, and policies regarding small and disadvantaged business utilization; and
- provide expertise on the utilization of all categories of innovative small businesses, including minority serving institutions that can deliver technical solutions in support of NASA

Core Functions

Advocacy: Advise the Administrator on all matters related to small business.

Promote Small Business: Develop and manage NASA programs that assist all small business categories and communities.

Small Business Focused Government

Contracting: Develop small businesses in high-tech areas that include technology transfer and commercialization of technology, and maximize the number of practicable opportunities for small business participation in NASA prime contracts and subcontracts.

Entrepreneurial Development: OSBP and NASA Centers provide individual face-to-face and Internet counseling for small businesses throughout the United States and in U.S. territories.

VISION STATEMENT

The vision of the Office of Small Business Programs (OSBP) at NASA Headquarters is to promote and integrate all small businesses into the competitive base of contractors that pioneer the future of space exploration, scientific discovery, and aeronautics research.

Robert O. Betts

Tabisa Taliwaku Kalisa, Program Manager

Office of Small Business Programs

Robert O. Betts, Small Business Specialist

Langley Research Center

Robert Betts is the new Small Business Specialist out of Langley Research Center (LaRC). We are excited to have him on the team. Tabisa Kalisa sat down with him to ask a few questions about what he brings to the NASA Office of Small Business Programs.



Robert O. Betts, Small Business Specialist.

was stationed in Iceland; England; Eglin Air Force Base, FL; and twice at Langley Air Force Base, VA. I was also deployed several times to the Middle East in support of Desert Storm/Desert Shield and Operation Iraqi Freedom. I became a civil servant 1 week after retiring from active duty. In my 12+ years as a civil servant, I've served as a Contract Specialist/Contracting Officer with the U.S. Air Force, Department of Veterans Affairs, and NASA, procuring everything from custodial services to MRI machines to space flight instruments. In November 2016, I began a detail with the NASA Langley Research Center (LaRC) Small Business Specialist, Randy Manning, and was fortunate enough to be selected as the Center's Small Business Specialist upon his retirement in January 2018.

Welcome to the small business family! Tell us a little about your background—where you grew up, your life experiences, and how you got into civil service?

I grew up in Sligo, NC, a small town in Eastern North Carolina just north of the Outer Banks. I married my hometown sweetheart and love of my life, Carla, over 32 years ago, and we have three amazing kids, Kelly, Lyndsay, and Travis. I retired from the U.S. Air Force in 2005 after 20 years of service; the first 12 years as a Munitions Specialist (AMMO) and the final 8 years as a Contract Specialist/Contracting Officer. During my time in the service, I

“Not only do I get to help folks, but I also get to find out a little about them and their companies as well as the challenges they are facing. I also love to travel and see new places, so this position certainly allows me to do more of that....”

What is your favorite part of being a Small Business Specialist?

There are several things I like about being a Small Business Specialist. One of my favorites is interacting with people one-on-one. Not only do I get to help folks, but I also get to find out a little about them and their companies as well as the challenges they are facing. I also love to travel and see new places, so this position certainly allows me to do more of that than my previous job. Finally, I get to work with a great group of people, the NASA Small Business family.

You spent some time shadowing Randy Manning, the previous Small Business Specialist at Langley. In your opinion, what is the biggest issue facing small businesses?

Small businesses face many challenges/obstacles, and one of the big issues, in my opinion, is responding to Government Requests for Proposals (RFPs). Although we've gotten better over the years, responding to our large, cumbersome requirements can be challenging and costly for any businesses, and that is especially true for small businesses with their more limited resources. Another huge challenge for small businesses is timely payments of invoices, which affect their cash flow and can mean the difference on whether a company can pay its employees, or even worse, determine if the company makes it or not.

Do you have particular dates in the month that you meet with small businesses at LaRC?

At the moment, I don't have particular dates during the month set aside to meet with small businesses. I can certainly see the value in establishing something like that, especially in my one-deep position at LaRC. I'd also like to figure out how to get more involvement from our technical and procurement communities in these meetings.

Thank you to Robert Betts for taking the time for this article, and we wish him all the best in his new position! »

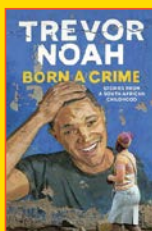
SMALL BUSINESS TEAM BOOK RECOMMENDATIONS



Tabisa Taliwaku Kalisa,
OSBP Program Manager

Born a Crime: Stories from a South African Childhood
by Trevor Noah

This is an excellent and riveting account of Noah's childhood in South Africa. It is a humorous journey devoid of bitterness in spite of the challenges of growing up in the apartheid era. Some of the barriers they faced are still issues today; however, the resilience and values woven through this book ensure it is a page-turner. I highly recommend the audio version since it is easier to understand the pronunciations.



David E. Brock,
MSFC Small Business Specialist

Good to Great
by Jim Collins

I highly recommend the book *Good to Great* by Jim Collins. The book provides information on how a good business can become a great business. Many of the applications contained in the book can just as easily be applied to life in general.



Robert A. Jones,
NMO Center Export Administrator/
SBIR Program Manager

Dr. Deming: The American Who Taught the Japanese About Quality
by Rafael Aguayo

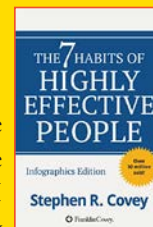
I recommend *The American Who Taught the Japanese About Quality*, about Dr. W. Edwards Deming, the father of quality management. Deming was one of the people that inspired me when I was young. His 14 Key Principles were used by Toyota and other successful businesses around the world. When you read it, understand it, and use those principles, you may find that it will make a big difference in your success.



Christine L. Munroe,
ARC Small Business Specialist

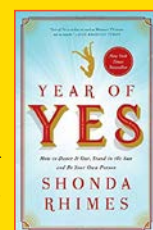
The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change
by Stephen R. Covey

This book changed my life when it first came out. I purchased the Franklin planner and have the tab seven habits that I can review weekly. I developed the five most important roles in my life mission statement and goals that I review on a quarterly basis. The book gave suggestions for proactive behavior that would allow me to create opportunities to view things differently and to create a system to maintain my personal and professional growth.



Year of Yes: How to Dance It Out, Stand in the Sun and Be Your Own Person
by Shonda Rhimes

I enjoyed the book. It assisted me with suggestions for my personal and professional growth.



Felicia A. Bell,
JPL Section Manager

The 12 Week Year: Get More Done in 12 Weeks than Others Do in 12 Months
by Brian P Moran and Michael Lennington

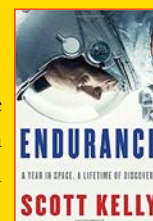
The 12 Week Year is a book on organizing and setting goals by Brian P. Moran. You break down your objectives into 12-week segments. Doing so helps you stay focused and reengage in your work.



Richard L. Mann,
OSBP Program Manager

Endurance
by Scott Kelly

Endurance by Scott Kelly discusses in very fine detail all the numerous challenges of long-term space flight on the human body, both physical and mental. »



“Prime Time” at Kennedy Space Center

Joyce C. McDowell, Small Business Specialist

Kennedy Space Center

What do 22 small businesses from 11 states have in common with KSC prime contractors? A keen passion to support John F. Kennedy Space Center’s mission to be the world’s premier multi-user spaceport!

Taking an important first step, these small businesses attended the inaugural KSC “Prime Time” featuring face-to-face, quick-tempo matchmaking with KSC’s prime contractors.

Small businesses from California to Connecticut, Georgia to Michigan, Virginia to Texas converged at the Central Industry Assistance Office, home of KSC’s Small Business Program, on February 20 to introduce their products and services to the Center’s prime contractors. According to customer and prime feedback, the format and results exceeded expectations. “Your office, by far, has the best platform and coordination for the most meaningful opportunity for small business to engage with Primes. We have engaged extensively with other Federal Agency small business offices for many years. Others should follow

your example,” according to Tredway Office Furniture Systems.

We greatly respect the limited time and resources of small businesses, so at KSC we embrace the “maximize time, identify the fit” strategy, according to Advanced Roofing JV LLC. “Loved the format... quickly found 3 out of 5 Primes were a good match. No wasted time,” said a representative of Release Team.

KSC primes also benefited greatly from our program’s laser focus on introductions that produced real-time results through this event. Jacobs Technology reported, “We are excited...identified two companies we can immediately do business with.”

Above and beyond creating relationships between attendees and primes, the KSC Small Business Program also facilitated the small businesses in creating a network amongst themselves by carving out

time for small-to-small exchanges, fueling connections for growth.

One small business—a fiberglass and metal fabricator—introduced to an engineering services firm in the same geographical area experienced a eureka moment: “We currently use a Chicago firm, but why do that when we can use another small business that is less than an hour away from us.”

Customer feedback highlights and confirms the success of our commitment to “help small businesses navigate the world of Government contracting at NASA and KSC.”

KSC’s Small Business Program will participate in more than 30 outreach events, either hosted, attended, and/or cosponsored in FY 2018. These events include the 27th annual NASA KSC Business Opportunities Expo, now billed as the Agency’s outreach event; KSC Industry Day; multiple NASA/KSC Direct meetings; KSC Prime Time events; and Joint Counseling sessions.

Each event, within our ambitious outreach schedule, assists in the realization of KSC’s Small Business Program Mission to “provide private industry with maximum KSC business opportunities by increasing contracting competition, and strengthening socioeconomic programs.”

For more information, please contact the KSC Small Business Program at 321-867-7353 or ksc-smallbusiness@mail.nasa.gov. »

OSBP Publications

The NASA Office of Small Business Programs (OSBP) Web site features multiple publications that highlight the work small businesses do for NASA. Visit <https://osbp.nasa.gov/publications.html> to download PDFs of the following or e-mail smallbusiness@nasa.gov to request a hard copy.



- » NASA Small Business Update
- » NASA Industry Forum Success Stories
- » NASA Space Launch System: A Case for Small Business
- » NASA Deep Space Human Exploration Spacecraft Orion: A Case for Small Business
- » Curiosity and NASA’s Mission to Mars: A Case for Small Business
- » NASA OSBP Spotlight: HUBZone
- » NASA OSBP Spotlight: Women-Owned Small Businesses
- » NASA OSBP Spotlight: Veteran-Owned Small Businesses

and more!

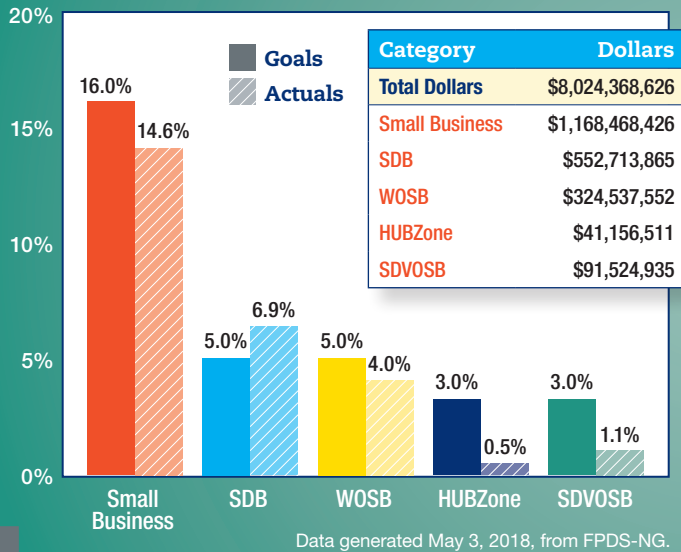


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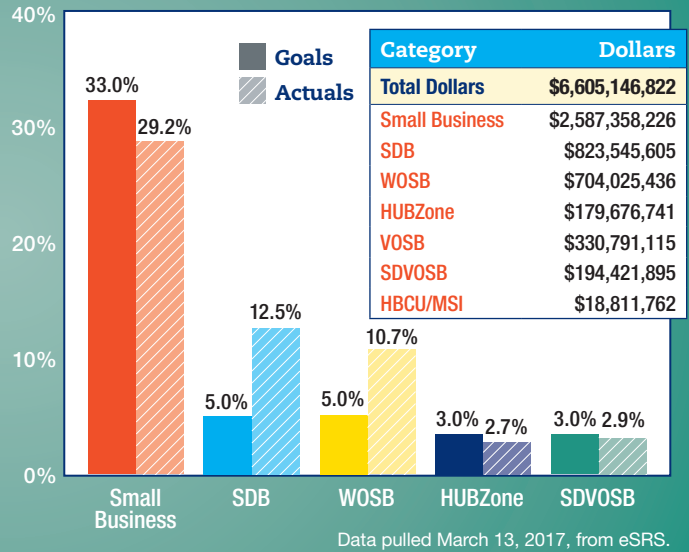
Christopher Grey, Program Analyst (Contractor)

NASA Office of Small Business Programs

April FY18 NASA Agency Prime Goals vs. Actual Percentages



Year-End FY16 NASA Subcontracting Goals vs. Actual Percentages



NASA Center Highlight: Kennedy Space Center

Don't Miss NASA's Premier Small Business Event, NASA Business Opportunities Expo at Kennedy Space Center!

Joyce C. McDowell, Small Business Specialist
Kennedy Space Center

“This is, by far, probably the largest outreach event for small businesses on the east coast,” said Glenn A. Delgado, NASA Associate Administrator, Office of Small Business Programs. “Opportunities like this don’t come along very often.”

The NASA Business Opportunities Expo is the Agency’s largest annual event for small businesses and has been hosted by Kennedy Space Center’s Small Business Program for the last 27 years.

Expo 2017 welcomed more than 1,700 small and large business representatives from across the Nation. NASA Headquarters and all 10 NASA Centers, as well as many other Federal agencies, participated in an effort to identify, inform, and connect with private industry.

The NASA Business Opportunities Expo 2018 is cosponsored by the 45th Space Wing, Patrick Air Force Base, and Canaveral Port Authority, and it will take place on Tuesday, October 23, 2018, at Cruise Terminal 6, Port Canaveral, FL.

For more information on how to exhibit or attend, please contact the KSC Small Business Program at 321-867-7353 or e-mail ksc-smallbusiness@mail.nasa.gov. »



Glenn A. Delgado, NASA Associate Administrator, Office of Small Business Programs, discusses contracting opportunities with one of the 1,700 Expo 2017 attendees.

State of Small Business

Eve Lyon, NASA Attorney

NASA Office of the General Counsel

The legal and procurement corner continues to be quiet. The administration requires that two regulations be rescinded before a new regulation can be published. This requirement resulted in only one procurement regulation being published last year, the repeal of regulations on Fair Pay and Safe Workplace. There will be a few more procurement regulations published this year, regulations that will include increasing the micropurchase and simplified acquisition thresholds. NASA can continue publishing guidance, policy, and instructions in the NASA Federal Acquisition Regulation (FAR) Supplement when the new coverage does not require rulemaking. Rulemaking is required when the proposed coverage would have a direct effect on the public.



Eve Lyon,
NASA Attorney.

Goddard Space Flight Center had an interesting size protest involving a small business that won a full and open competition. A disapproved large offeror filed a size protest with the Small Business Administration (SBA). In rejecting the argument that a large business could not file this size protest, the SBA stated:

[E]ven in competitive full and open procurements, entities claiming a small business status may be eligible for certain benefits only offered to small business, such as price evaluation preferences in acquisitions valued over a certain threshold.

Although price evaluation preferences disappeared with 10 U.S.C. 2323, NASA's evaluation of small business subcontracting plans does confer a benefit to small

businesses in full and open competitions. The risk of a size protest is worth the value NASA receives evaluating subcontracting plans. In this case, the SBA found the awardee was small.

I intend to retire at the end of June 2018, but I cannot do so before saying thank you. It has been my privilege to provide legal support to the Office of Small Business Programs and the Small Business Specialists (SBS). I am not certain you are aware of how unique and special you are. You showed me how promoting capable small businesses helps the U.S. economy. I recognized that your core function, which is to help small businesses prosper, also makes

“I intend to retire at the end of June 2018, but I cannot do so before saying thank you. It has been my privilege to provide legal support to the Office of Small Business Programs and the Small Business Specialists”

your community special. Helping is your motto, which manifests itself in how you assist each another, share ideas, and communicate lessons learned. You made me feel part of your community (and how many people like attorneys?). I trust you will continue your excellent work—excellence premised on the community's outstanding core values.

With this, I bid adieu. ➤

NASA Vendor Database Subcontracting Module

The new subcontracting module is available as a separate option in the NASA Vendor Database (NVDB) for registrants. By joining the subcontracting module, prime contractors can find subcontracting partners. For firms looking for subcontracting opportunities, this module will provide a potential list of NASA partners. As with the regular NVDB, the subcontracting module is open to both large and small companies. Both current and new registrants must opt in to join the module.



After registering in the NVDB at <https://vendors.nvdb.nasa.gov>, log into your account, open “Manage My Vendor Record,” click on the new second tab, “Subcontractor Details,” and select “Yes” in the drop-down menu to join. Fill in the capabilities text box.

NASA SBIR/STTR Successfully Pilots Small Business Support Program

Marnie Fienberg

NASA SBIR/STTR Program Communications



NASA's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs want small businesses to not only see their ideas prototyped, but to succeed and help us meet our research and development (R&D) goals. NASA SBIR/STTR has piloted multiple programs to help meet this goal. One of our key successes has been our involvement with the National Science Foundation's (NSF's) Innovation Corps Program (I-Corps™).

SBIR/STTR partnered with the NSF to offer selected Phase I contractors the opportunity to participate in the NSF I-Corps. Through the I-Corps Training Program, small businesses can gain a better understanding of their customers' needs and value proposition, as well as obtain an outline of a business plan for moving forward. NASA offers two I-Corps Programs, Bootcamp and Cohort, both including entrepreneurial immersion training course, interviews with potential customers, and development of a Business Model Canvas. The Cohort is a much more comprehensive program.

Pilot Details

For the pilot I-Corps Program, each selected SBIR/STTR Phase I company formed a three-person team consisting of the Principal Investigator, an Entrepreneurial Lead (i.e., founder, president, or business executive), and an Industry Mentor. The I-Corps curriculum is team-centric and emphasizes customer discovery and development, risk assessment, lessons learned, agility, and evidence-based strategies for commercialization. The training is led by instructors who have each created one or more companies and who have also served as industry mentors. The instructors lead the classroom training material presentations, feedback and lessons-learned discussions, office hours, and Webinar presentations. Besides classroom participation both at the kickoff and closing workshops, the teams attend weekly Webinars led by the instructors and perform weekly homework assignments (books, articles, and videos).

For 2017, NASA selected 11 SBIR/STTR Phase I companies for I-Corps. Each company received an R&D training grant that was issued in parallel with the Phase I contract. Each grant also included funding to support the company's I-Corps participation.

I-Corps in 2018 and Beyond

In 2018, I-Corps is part of the competition for Phase I awardees and begins when small companies submit Phase I proposals. NASA SBIR/STTR anticipates that approximately 25 SBIR and 10 STTR firms will be selected for participation in I-Corps.

NASA SBIR/STTR Plans to Continue I-Corps in 2019

Interested in participating as part of your SBIR/STTR experience? Additional information for the NASA I-Corps Program is available at <https://sbir.nasa.gov/content/I-Corps>. Learn more about NASA SBIR/STTR at <https://sbir.nasa.gov>. »

NASA OSBP WORD FIND

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CURIOSITY
FISCAL
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MATCHMAKING
MENTOR
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NASA

ORION
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PRIME
PROTÉGÉ
SBIRSTTR
SUBCONTRACTOR
YEAR

First HBCU To Sign Mentor–Protégé Agreement with Prime Contractor at Johnson Space Center

Karen B. Cotton, M.A., Manager, Marketing and Communications

Prairie View A&M University

A little over a year ago, after meeting with PVAMU staff, the Senior Small Business Specialist, NASA Johnson Space Center (JSC) Industry Assistance Office, Charles T. Williams, marveled at the untapped resources at the university. PVAMU's staff and faculty quickly established a relationship with the NASA Office of Small Business Programs. Williams invited PVAMU staff to attend the local National Contract Management Association (NCMA) Space City Chapter Small Business Conference and Trade Fair Building Bridges Across Industry. At the event, Williams noted that PVAMU was the only Historically Black College and University (HBCU) present and encouraged contractors present to connect with them. A few months later, PVAMU staff, including the Vice President for Research, Innovation and Sponsored Programs, Dr. Cajetan M. Akujuobi, attended and presented at the NASA HBCU/Minority Institutions (MI) Technology Infusion Road Tour at Tennessee State University and participated in matchmaking at the event.

With this new 12-month agreement PAE, a NASA JSC prime contractor will provide tactical business and

technical support to assist PVAMU in gaining the competitive edge needed to attract larger and more substantial contracts. Donna Elmore-Cole, the Senior Contracts Negotiator at PVAMU, states, "This strategic partnership with PAE, NASA JSC, is a multiple benefit project for our university. It will showcase our innovative technical capabilities, visionary faculty, and provide a gateway to incredible opportunities for students' academic and career aspirations. Further, it will position PVAMU to secure future revenue streams that will support our steady and continued growth."

PVAMU has a long-established relationship with NASA, including the Prairie View Solar Observatory (PVSO), the first ground-based Solar Research Facility, established in 1999. Since then, PVAMU has collaborated with NASA on a compendium of projects such as the Center for Radiation Engineering and Science for Space Exploration (CRESSE), NASA Microgravity University, NASA Minority Innovation Challenges Institute (MICI), the Reduced Gravity Student Flight Opportunities Program, and the Thermal Science Research Center (TSRC).



Karen B. Cotton
Prairie View A&M
University.



The PVAMU team at NASA JSC Mission Control.

Prairie View A&M University is the second oldest public institution of higher education in Texas. Their land-grant heritage and historical research history position them well for today's significant challenges. Their capabilities include cybersecurity, food and water security, energy and the environment, radiation studies, signal/image/video and communication systems, wavelet-based applications, nanotechnology and biotechnology, health and educational disparities, evolutionary biology, computational science, leadership and business development, and the social and behavioral sciences.

Vice President Dr. Cajetan M. Akujuobi said it best when he said, "Prairie View is open and ready to do business." »

Important Dates to Remember

May 29

**NASA Kennedy Space Center
Business Opportunities Expo
Cape Canaveral, FL**

July 17–18

**Reaching High: Matching
Mid-West Businesses with
Government Opportunities; in
partnership with NASA/HBCU
Engagement at Ohio University
Athens, OH**

August 14–16

**How to Do Business with the Federal
Government/NASA's HBCU/MI
Technology Infusion Road Tour at
the University of Hawai'i-Mānoa
Honolulu, HI**



Minority University Research and Education Program (MUREP) Institutional Research Opportunities (MIRO) Center Soars to New Heights

Ashan R. Choudhuri, Ph.D.

University of Texas at El Paso

The University of Texas at El Paso (UTEP) MIRO Center for Space Exploration and Technology Research (cSETR) possesses aspirations as lofty as the frontiers beyond Earth it is trying to reach.

And it is meeting those challenges with aplomb.

The center located on the campus of the University of Texas at El Paso houses one of the premier chemical propulsion programs in the country and is a focal point of UTEP's long-term strategy to bring the region to the forefront of aerospace research and development.

Originally established as the Combustion and Propulsion Research Laboratory, cSETR's vision is to establish a university center of excellence in advanced aerospace and defense systems research through strategic partnerships and to educate an aerospace and energy workforce that possesses 21st-century demographics.

Ahsan Choudhuri, Ph.D., Chair of UTEP's Engineering Department and Director of cSETR, has deftly guided the center from its founding in 2001 as a fledgling laboratory funded by a \$50,000 internal institutional investment to its current state, an array of state-of-the-art experimental and computational facilities supporting research and educational activities in propulsion and clean-energy engineering.

Today, cSETR boasts 40,000 square feet of facilities on and off the UTEP campus. More than a quarter of that space is composed of its Goddard Combustion and Propulsion Research Facility and the Challenger-Columbia Structures and Materials Research Facility, where small rocket development with the use of green propellants takes place. In addition, the 4,000-square-foot Spacecraft Design and Engineering Facility announced the launch of its first CubeSat—a miniature satellite used for space research—in 2017.

In 2016, cSETR announced a collaboration with El Paso County to expand its footprint to the eastern fringe of the county with the MIRO cSETR Technology Research and Innovation Acceleration Park (tRIAc) in Fabens, TX, adjacent to the existing Fabens Airport.

The county partnership will place academic talents from UTEP alongside industry leaders in an effort to create new, high-paying technical jobs for the area to bolster the economy of the surrounding region. That effort was greatly aided last fall by a \$1,000,000 economic development project from the U.S. Department of Commerce to create and expand cluster-focused proof-of-concept and commercialization programs through the Economic Development Administration's (EDA) Regional Innovation Strategies (RIS) program.

At its core, cSETR's mission is to facilitate student success. Since 2009, the center has supported more than 300 students on campus, including more than 200 graduate students. Those

graduate students move on to employment with agencies and companies such as NASA, Lockheed Martin, Raytheon, the Department of Defense, Intel, Blue Origin, General Electric, and others.

In addition to university students, cSETR also conducts outreach with the K–12 sector in the El Paso area. The MUREP Aerospace Academy (MAA) for the Southwest, a nationally renowned and progressive educational program to inspire, was established to engage and educate students, parents, and communities. Since 2009, MAA Southwest has provided more than 5,000 K–12 students with NASA curriculum enhancement activities.

The center has forged a long-term strategic partnership with Lockheed Martin Corporation (LMC). The partnership, which encompasses all business units of LMC, includes internships, curriculum development, adjunct teaching, and research and development projects.

The center's mission is aided by a fellow UTEP research center, the W.M. Keck Center for 3D Innovation. The Keck Center is a 30,000-square-foot multidisciplinary research facility focused on additive manufacturing. The Keck Center is a world-class research facility that focuses on the use and development of additive manufacturing technologies for fabricating 3D objects that are plastic, metal, ceramic, of bio-compatible materials, or composite materials, or that contain electronics. »

"Today, cSETR boasts 40,000 square feet of facilities on and off the UTEP campus. More than a quarter of that space is composed of its Goddard Combustion and Propulsion Research Facility and the Challenger-Columbia Research Facility, where small rocket development with the use of green propellants takes place."

NASA's Minority University Research Education Project for American Indian and Alaskan Native STEM Engagement (MAIANSE) Program

Torry Johnson, NASA Activity Manager for the MAIANSE and MUREP

Jeannette Allen, Research Scientist

Science Systems and Applications, Inc.



Wynona Wilson and Shane Tsosie are seniors majoring in digital manufacturing at Navajo Technical University.



NTU student Marcie Vandever operates NTU's vertical milling Computer Numerical Control (CNC) machine while chipping away at a metal block.

Navajo Technical University (NTU) is a tribally controlled postsecondary career and technical institution in Crownpoint, NM. NASA provided funding for the university's first 4-year program in digital manufacturing, new media, and computer technology several years ago. The funding enabled the university to start utilizing 3D printing, laser scanning, and white-light scanning, and acted as a springboard for engineering program funding from the National Science Foundation. The university moved forward energetically and creatively to build on those activities, now offering 4-year degree programs in industrial engineering and mechanical engineering. A newly created 2-year associate of applied science degree in engineering technology is the latest addition to the programs offered at NTU. Faculty are currently building a chemical engineering program while designs for a business degree are underway.

Students at Navajo Technical University's Center for Digital Technologies are engaged in advanced manufacturing processes, metrology, and material science. For example, students in metrology

not only learn geometric dimensioning and tolerancing, but also gain hands-on experience with sophisticated metrology equipment. Students use laser scanning, white-light scanning, laser trackers, portable coordinate measurement machines, and computed tomography as well as metrology hand tools. NTU also maintains a 3D printing lab with several 3D printers.

NASA also funded internships for NTU students for several years through the American Indian Higher Education Consortium (AIHEC, <http://www.aihec.org/>). NTU's first industrial engineering graduate, Faye Clawson, worked as a NASA intern on the aerodynamics of fin structures for drones. Other NASA interns have worked with digital manufacturing, additive manufacturing, and laser scanning projects over several years. NTU student interns were part of a group that received a Marshall Space Flight Center Group Achievement Award for Excellence in Digital Manufacturing and Process Planning.

The National Science Foundation and the U.S. Department of Energy have

provided funding to NTU to conduct research and build infrastructure. This funding has helped to enable NTU to work with four other tribal colleges to increase their advanced manufacturing capabilities in the area of additive manufacturing and metrology/quality control/inspection and white-light scanning technology/point cloud processing.

NTU does some work for commercial firms. For example, the university has helped a firm in Albuquerque with design iterations of sensor enclosures, has worked with an architectural firm making models and laser scanning, and is providing use of equipment to a student as he creates his own business in the drone and rover technology field.

Engineering professor Harry Whiting likes to teach NTU's project management course, in which he creates opportunities for students to learn about, and to carefully think through, what starting a small business will entail, especially as it might benefit the Navajo Nation. Students learn that location, resources, support, and teamwork are key factors in developing a firm foundation for emerging businesses. They learn all the steps that small business entrepreneurs must take, such as in financial, legal, and accounting activities, which can be daunting without the kind of support and encouragement that Whiting's course provides.

Contact for NASA's MUREP American Indian/Alaska Native Science, Technology, Engineering, and Mathematics (STEM) Engagement Program

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SMALL BUSINESS SUCCESS STORY

Zandef Deksit, Inc., M2020 EDL Camera Microphone Report

Robert A. Jones, Center Export Administrator/CUO/TCO/
SBIR Program Manager

NASA Management Office

Identification and Significance of Innovation: Building upon previous decades of research and prior attempts to capture extraterrestrial audio, the Mars 2020 rover (M2020) will, if successful, record the first sounds from the surface of another world. Key to this mission is understanding and successfully predicting the risks and challenges associated with operating a recording medium in Mars's atmosphere while subject to the underlying hazards associated with deep space travel as well as radioactive elements of the rover itself.

The significance of auditory feedback on a planet being considered for human colonization cannot be overemphasized, as it offers an entire new sensory perception to what will become the daily life of future inhabitants. For contrast, one need only plug their ears and go about daily tasks and the importance of this perception becomes rapidly apparent.

Technical Objectives, Work Plan, and Technical Accomplishments: The most basic objective of our evaluation study has been to advise NASA on the most reliable means to record audio during the Entry, Descent, and Landing (EDL) phase of the Mars 2020 lander mission. This audio will accompany video recording of the Sky Crane maneuver by which the final landing stage of the M2020 will proceed. Our evaluation has covered a wide breadth of numerous existing microphone technologies as well as consideration and proposed initial design concepts of possible custom modifications to further ensure and optimize performance in Martian atmosphere.

It has also been our goal to provide the highest quality data capture and continued functionality of this microphone, beyond the landing sequence and throughout the continuing lifespan and operation of M2020 on the Martian surface. NASA has made it clear, however, that safety (risk-assessment) and durability are of the highest priority. The microphone pertaining to this study has been officially classified as a "technology demonstration."

To this end, our team has applied a working experience of development and application of highly sought-after technologies in terrestrial audio recording, alongside a combined consideration of and prior research into space-hardened materials development. Prior unsuccessful attempts to record audio on Mars in recent years have also yielded a number of previous studies of which much information has recently been obtained, tested, and summarily verified or discounted in initial test procedures under our direction at NASA's Jet Propulsion Laboratory. Proposed forthcoming tests will continue to yield important information that will affect future design properties of this emerging technology.

NASA Application(s): The direct application of this microphone will be the initial landing stage of the M2020 rover as stated above. Success of this technology demonstration will pave the way for further developments in extraterrestrial audio engineering. When applied to future human colonization efforts, this technology will serve to provide increased safety, mobility, work efficiency, and long-term psychological benefits for

workers on the planet's surface.

Non-NASA Commercial Application(s): After this technology demonstration, we predict many future commercial applications for this technology. As space commercialization moves forward, the application of a fully optimized microphone fully guaranteeing space-readiness and optimized functionality will be beneficial.

One of the applications will be a Mars microphone that can be made available for future planetary exploration by private industry and commercial space companies or government-sponsored space agencies, with a goal of offering a useful and cost-effective tool for implementation in planetary robotic or piloted systems including, but not limited to, exo-Mars chassis design, be it an atmospheric extravehicular activity (EVA) suit or an autonomous vehicle such as a rover or drone aircraft.



Mars Atmospheric Suit Microphone.

As the next decades come upon us and bring both robotic and human habitation on planets such as Mars, the microphone will enhance environmental awareness via introduction of an entirely new auditory element.

For commercial applications, it can be used for mining, increased productivity, safety awareness, monitoring of environments, law enforcement, search and rescue, earthbound and extra-terrestrial explorers in places like caves and caverns, or even for hikers and others.

Principal Investigator

Jason A. Mezilis
Zandef Deksit, Inc.



The JSC team provided in-depth technical information to the community during the Light Manufacturing Event.

The objective was to promote small business through advocacy and collaborative efforts with internal and external partners/stakeholders, and Engineering responded significantly by identifying three areas including machine shops, 3D printers, and circuit board manufacturers, where small businesses could play a significant role. NASA engineers were highly interested in meeting with vendors to understand their capabilities and see how they could help meet existing and future requirements.

The discussions between the Engineering Directorate and the IAO turned into the JSC Light Manufacturing Event (LM) that took place in June 2017 in the Gilruth Ballroom. The objective was to conduct market research in the identified areas by inviting vendors to display examples of their capabilities and discuss them with JSC engineers. Vendors were asked to bring examples of their capabilities and have their technical people available to speak to engineers. Thirty vendors displayed their capabilities, and more than 100 JSC civil service and contractor personnel attended.

The highlight of the event was a visit from Glenn A. Delgado, NASA's Associate Administrator for the Office of Small Business Programs. During the visit, Delgado spoke to attendees on the importance of NASA supporting small business meet its mission and how small businesses have contributed to NASA's mission success. Delgado also took time out of his schedule to visit several small business machine shops in the Houston area that are currently working as subcontractors on JSC projects.

The objectives originally planned included engineers meeting vendors with unique capabilities and offering vendors a chance to

speak to engineers to understand their requirements. In effect, both engineers and vendors were able to conduct market research, which is often difficult to accomplish when vendors visit the Center. The JSC IAO expected significant participation from the JSC large prime contractors who were looking for small businesses with the same capabilities, and they contributed significantly to the event. Both large primes and NASA engineers visited many of the vendors to assess their capabilities and were subsequently placed on

the large prime contractor qualified vendor lists. Within a few months, several of the light manufacturing companies started to get work in the form of both small contracts with NASA and subcontracts with the large primes. Almost every month, we hear from one or more of the vendors who have gotten work or been put on a qualified vendor list as a result of the event.

With the success of the first Light Manufacturing Event (LM), a second is planned this summer called LM-II. The Engineering Directorate has asked that we expand the focus areas to include small businesses with robotics and wire harness capabilities.

The 2017 Light Manufacturing event proved the effectiveness of a focused technical event in connecting JSC engineers and light manufacturing vendors to help meet some of JSC's most difficult challenges. JSC

also realized an unexpected benefit in the form of an expanded base of small business support contractors for its larger prime contractors. This ultimately will promote competition by increasing the pool of qualified vendors to bid on NASA-JSC requirements. »

“With the success of the first Light Manufacturing Event (LM), a second is planned this summer called LM-II. The Engineering Directorate has asked that we expand the focus areas to include small businesses with robotics and wire harness capabilities.”

Mentor-Protégé Update

Tabisa Taliwaku Kalisa, Program Manager

Office of Small Business Programs

NASA is excited to announce that the U.S. Small Business Administration has granted NASA, along with the Department of Homeland Security and the Department of Energy, the authority to operate independent mentor-protégé programs through February 2023. We thank all of our Small Business Specialists for their passion and commitment to the program, which led to NASA receiving this approval.

Johnson Space Center's (JSC's) latest mentor-protégé agreement is between PAE Applied Technologies, LLC, as the mentor and Prairie View A&M University, the protégé, a Historically Black College and University (HBCU). PAE Applied Technologies, LLC, will mentor Prairie View A&M University in proposal development, procurement FAR compliance, and various technical trainings. JSC is the first Center to have a mentor-protégé agreement with an HBCU outside of Marshall Space Flight Center (MSFC).

The NASA Shared Services Center's (NSSC's) latest mentor-protégé agreement is between Enterprise Services, LLC, as the mentor and Jackson State University, the protégé, an HBCU. Enterprise Services, LLC, will cultivate Jackson State University in business and technical fields, including business development, capture management, infrastructure, and an Automated Testing Center (ATC) Lab buildout.

Both Prairie View A&M University and Jackson State University have been involved in the NASA HBCU/MI (Minority Institution) Technology Infusion Road Tours, which are designed to assist NASA and its large prime contractors in exceeding the Agency's 1 percent HBCU/MI goal. NASA would like to thank PAE Applied Technologies, LLC; Enterprise Services, LLC; Teledyne Brown Engineering; Science Applications International Corporation (SAIC); and all prime contractors who proactively participate in networking with HBCUs/MIs, leading to Government contracting opportunities. The Road Tours is open to any HBCU/MI that would like to participate and learn how to successfully respond to contracting opportunities with the Federal Government. Below is a list of our upcoming HBCU/MI events:

| | | |
|------------------|--|--------------------|
| August 1–2 | JPL's Third Annual HBCU/MSI Outreach Initiative | Pasadena, CA |
| August 14–15 | NASA's HBCU/MI Technology Infusion Road Tour at University of Hawai'i at Mānoa | Honolulu, HI |
| August 16 | 2018 Federal Small Business Summit | Honolulu, HI |
| September 19 | Fourth Annual HBCU/MI Partnerships Meeting | Huntsville, AL |
| October/November | KSC HBCU/MI Technology Summit | Cape Canaveral, FL |

SOCIAL MEDIA UPDATE



Tabisa Taliwaku Kalisa, Program Manager
Christopher Grey, Program Analyst (Contractor)

NASA Office of Small Business Programs



Have you downloaded the NASA OSBP Mobile app yet? Simply search for "NASA OSBP Mobile" in the Google Play Store or iTunes App Store to download for free. The app provides critical resources right at your fingertips, including contact information for NASA Center Small Business Specialists, active contract listings, and upcoming network events.

NASA OSBP has a Facebook page and a Twitter handle! Why? NASA OSBP would like the public to have instant access to small business information. Whether it is news that impacts the small business community, outreach and matchmaking events, or procurement opportunities—we want to simplify the process.



Please take a moment to like us on Facebook at <http://www.facebook.com/NASASmallBusiness> and follow us on Twitter at http://twitter.com/NASA_OSBP. Also, tune in to Glenn's blog at <http://nasaosbp.blogspot.com>. It will take only a few minutes of your time, and we would absolutely love to hear from you!



Screenshot of Glenn's blog at <http://nasaosbp.blogspot.com>.

not looking at competition as competition, but as a potential partner.

- d. Write a success story and publish it on the NASA OSBP Web site. Share it with your local SBS.
- e. Tell your competitors about upcoming set-aside contracts for which they may be eligible (WOSB, SDVOSB, and HUBZone).

3. Plan and Execute

- a. Devise a strategic business plan and implement it.
- b. Have a roadmap to keep you on track and ensure success.
- c. Review the NASA Acquisition Forecast, NASA Solicitation and Proposal Integrated Review and Education System (NSPIRE), and SBIR Web sites at least twice a year.
- d. When meeting with the Contracting Officer regarding an upcoming requirement, make sure that you review the requirement and submit questions in writing prior to the meeting.
- e. Add the NASA OSBP mobile app to your Android or iPhone.

4. Build Relationships—Relationships Are Key in Any Sector

- a. Attend outreach events for network/matchmaking opportunities with other NASA prime contractors and other Federal agencies.
- b. Register a subcontracting need in the NASA Vendor Database.

5. Be Prepared

- a. Have an elevator speech that addresses what your company does when meeting with other industry or Government.
- b. Have a capability sheet for each of your capabilities no more than one page designed for each office that you are communicating with.
- c. Know your NAICS codes, General Services Administration (GSA) contracts, and socioeconomic codes.

Here are a few important Web sites for the novice and companies who have done business with the Federal Government:

- **Small Business Administration (SBA) Assistance**—Consult with the U.S. Small Business Administration (SBA) Representatives Procurement Center Representatives (PCRs). <https://www.sba.gov/contracting/resources-small-businesses/pcr-directory>
- **SCORE**—Get free and confidential mentoring by former CEOs through SCORE. <http://www.score.org>
- **SBA Business Development Centers (SBDC)**. <https://www.sba.gov/tools/local-assistancesbdc>
- **Procurement Technical Assistance Centers**—Small businesses can request training and counseling on marketing, financial, and contracting issues at minimal or no cost from Procurement Technical Assistance Centers (PTACs). They are located in most states and are partially funded by the U.S. Department of Defense (DOD) to provide small business concerns with information on how to do business with DOD and other Government agencies. <http://www.ptac-us.org/>
- **USA.gov**—This site shows small businesses how to sell to the Government and finance their efforts. <https://www.usa.gov/business>

- **The Federal Procurement Data System-Next Generation (FPDS-NG)**—FPDS is the repository for all Federal contracting data whose estimated value is \$3,500 or more. Every modification to any contract, regardless of dollar value, must be reported to FPDS-NG. Small businesses may use this tool to track business opportunities by agency or department. The system data provide historical data of Federal purchases. <https://www.fpds.gov>
- **U.S. Government Manual**—Includes leadership tables and describes agency activities and programs of the executive, judicial, and legislative branches of Government, as well as activities and programs of quasi-official agencies and international organizations in which the United States participates as a member. <https://www.usgovernmentmanual.gov> »

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Visit us online: <http://www.osbp.nasa.gov>

OSBP TEAM

The OSBP team is committed to providing excellence in service and information to the small business community.



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